

STAKHANOVA, M.S.; YEPIKHIN, Yu.A.; KARAPET'YANTS, M.Kh.

Volume and heat capacity changes in aqueous salt solutions.
Part 2. Zhur. fiz. khim. 37 no.11:2570-2573 N'63.

(MIRA 17:2)

1. Moskovskiy khimiko-tehnologicheskii institut imeni
D.I. Mendeleeva.

KARAPET'YANTS, M.Kh.; CHEN GUANG-YUYE

Methods for calculating the properties of substances in polar
coordinates. Part 2. Zhur. fiz. khim. 37 no.11:2577-2580 N°63.
(MIRA 17:2)

1. Moskovskiy khimiko-tekhnologicheskoy institut imeni Mendeleyeva
i Sychuan'skiy universitet.

DRAKIN, Sergey Ivanovich; KUDRYAVTSEV, Aleksandr Andreyevich;
SELIVANOVA, Nadezhda Mikhaylovna; MAYYER, Antonina
Ivanovna; SAMPLAVSKAYA, Kira Karlovna; SOLOKHIN, Viktor
Aleksseyevich; STAKHANOVA, Mariya Sergeyevna; ALAVERDOV,
Ya.G., red.; FEDOROVA, T.P., red.; KARAPET'YANTS, M.Kh., red.

[Laboratory work in general and inorganic chemistry]
Praktikum po obshchei i neorganicheskoi khimii. Moskva,
Vysshaya shkola, 1964. 268 p. (MIRA 18:4)

VOROB'YEV, Nikolay Konstantinovich; GOL'TSSHMIDT, Vladimir
Avgustovich [deceased]; KARAPET'YANTS, Mikhail
Khristoforovich; KISELEVA, Vera Leonidovna; KRASNOV,
Konstantin Solomonovich; LEVINSKIY, Yu.V., red.

[Laboratory work in physical chemistry] Praktikum po
fizicheskoi khimii. Izd.3., perer. i dop. Moskva, Khi-
mii, 1964. 383 p. (MIRA 18:4)

ACCESSION NR: AP4015145

S/0064/64/000/002/0130/0133

AUTHORS: Karapet'yants, M. Kh.; Churicheva, L. V.

TITLE: Adapting methods of comparative calculation for estimating certain properties of n-perfluoroalkanes

SOURCE: Khimich. promy'shi., no. 2, 1964, 130-133

TOPIC TAGS: perfluoroalkane, boiling point, critical temperature, critical pressure, critical volume, normal alkane, saturated vapor pressure, comparative calculation

ABSTRACT: The correlation between the boiling point and saturated vapor pressure, and the critical parameters (pressure, temperature, volume) of n-perfluoroalkanes were approximated using methods I, II, and IV of comparative calculations as described by Karapet'yants (Khim. prom., No. 1, 33 (1961)). Because of their accuracy, data for n-alkanes (which are similar to the n-perfluoroalkanes) were used as the basis for the calculations. The boiling point at pressures ranging from 15 mm. Hg to 20 atm. was calculated for some of

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ACCESSION NR: AP4015145

the $C_3 - C_{18}$ n-perfluoroalkanes according to the two equations:

$$t_{n-C_nF_{2n+2}} = \left(0.8522 + \frac{1.7829}{P} \right) \cdot t_{n-C_nH_{2n+2}} + 5.079 \lg P - 16.26$$

$$t_{n-C_nF_{2n+2}} = 10^{-0.00015 t_{n-C_nH_{2n+2}} + 58.12} - 15.95$$

Wherein $t_{n-C_nF_{2n+2}}$ = boiling point and P = pressure mm Hg. These estimated data compare favorably with the experimental data available. The critical temperature t_{cr} , pressure P_{cr} and volume V_{cr} can be estimated from the following equations:

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ACCESSION NR: AP4015145

$$\begin{aligned}(t_{cr})_{n-C_nH_{2n+2}} &= A_1'(t_{cr})_{n-C_nH_{2n+2}} + B_1' \\ (P_{cr})_{n-C_nH_{2n+2}} &= A_1'(P_{cr})_{n-C_nH_{2n+2}} + B_1' \\ (V_{cr})_{n-C_nH_{2n+2}} &= A_1'(V_{cr})_{n-C_nH_{2n+2}} + B_1' \\ (P_{cr})_{n-C_nH_{2n+2}} &= A_2'(t_{cr})_{n-C_nH_{2n+2}} + B_2'\end{aligned}$$

The following coefficients for these equations were calculated from data for n-alkanes: $A_1' = 0.75973$, $B_1' = -1.86$, $A_2' = 0.69132$, $B_2' = -2.725$, $A_1'' = 1.6301$, $B_1'' = -31.5$, $A_2'' = 0.0803$ and $B_2'' = 1$. The average errors in the estimated critical parameters are in the range of 0.20, 0.1 atm. and 4.3 cm³/mol. Orig. art. has: 12 Equations and 9 Tables.

ASSOCIATION: None

SUBMITTED: 00

SUB CODE: PH, MM

DATE ACQ: 12Mar64

NR REF SOV: 004

ENCL: 00

OTHER: 023

Card 3/3

SKLENSKAYA, E.V.; KARAPET'YANTS, M. Kh.

Use of the methods of comparative evaluation for determining the values of the instability constants of the halides of Al, Ga, In, Tl. Zhur. neorg. khim. 9 no.11:2564-2568 N '64 (MIRA 18:1)

YEPIKHIN, Yu.A.; STAKHANOVA, M.S.; KARAPET'YANTS, M.Kh. (Moscow)

Changes in volume and heat capacities in aqueous salt solutions.
Part 3. Zhur. fiz. khim. 38 no.3:692-696 Mr '64.

(MIRA 17:7)

1. Moskovskiy khimiko-tekhnologicheskii institut imeni D.I.
Mendeleeva.

KARAPET'YANTS, M.Kh.; ZHUKOV, G.V.

Application of the methods of comparative calculation for
estimating the properties of substances in corresponding
states. Part 1. Zhur. fiz. khim. 38 no.4:1015-1018 Ap '64.
(MIRA 17:6)

1. Moskovskiy khimiko-tekhnologicheskiy institut imeni D.I.
Mendeleyeva.

KARAPET'YANTS, M.Kh.; BOYEV, F.I.

Application of the methods of comparative calculation for making the approximations of the type $f(G_1, G_2, \dots) = \text{const}$ more accurate. Part 1: Corrections of Trouton's rule. Zhur. fiz. khim. 38 no.4:1019-1020 Ap '64. (MIRA 17:6)

1. Moskovskiy khimiko-tekhnologicheskii institut imeni D.I. Mendeleeva.

DRAKIN, S.I.; YERBANOVA, L.N.; KARAPET'YANTS, M.Kh. (Moscow)

Determination of instantaneous heat effects by means of the
Mishchenko and Sukhotin modification of the Schottky calorimeter.
Zhur. fiz. khim. 38 no.4:1051-1054 Ap '64. (MIRA 17:6)

1. Moskovskiy khimiko-tekhnologicheskii institut imeni D.I.
Mendeleeva.

KARAPET'YANTS, M.Kh.; VARNIAKOV, S.V.

Application of comparative calculation methods for refining
some relationships. Refinement of the Guldber-Gouy rule.
Zhur. fiz. khim. 38 no.6:1679-1682 Je '64.

(MIRA 18:3)

1. Moskovskiy khimiko-tekhnologicheskij institut imeni Mendeleeva.

KHOLPANOVA, I.P.; KARAPET'YANTS, M.Kh.

Basis for comparative calculation methods. Zhur.fiz.Mat. 36 no.8:2093-
2094. Ag '64. (MIRA 1383)

1. Tul'skiy politekhnicheskii Institut i Moskovskiy khimiko-tekhnologicheskii Institut imeni D.I.Mendeleeva.

STAKHANOVA, M.S. (Moskva); KARAI'ET'YANTS, M.Kh. (Moskva); VASIL'YEV, V.A. (Moskva); YEPIKHIN, Yu.A. (Moskva)

Comparative study of the heat capacities and densities of aqueous electrolyte solutions. Zhur. fiz. khim. 38 no.10:2420-2429 0 '64.
(MIRA 18:2)

1. Moskovskiy khimiko-tekhnologicheskii institut imeni D.I. Mendeleeva.

YERBANOVA, L.N.; DRAKIN, S.I.; KARAPET'YANTS, M.Kh.

Comparative study of the heats of solvation of ions in alcohols.
Zhur.fiz.khim. 38 no.11:2670-2674 N '64.

(MIRA 18:2)

1. Moskovskiy khimiko-tekhnologicheskij institut imeni Mendeleeva.

L 24786-65 EPF(c)/EPA(s)-2/EWT(m)/EWP(b)/EWP(t) Pr-4/Pt-10 IJP(c) RDW/
ACCESSION NR: AP4049619 JW/JD/JG S/0076/64/038/011/2733/2735 34
33
B

AUTHOR: Silina, E. Yu.; Karapet'yants, M. Kh.

TITLE: Temperature dependence of the pressure of saturated mercury telluride
vapors 27 27

SOURCE: Zhurnal fizicheskoy khimii, v. 38, no. 11, 1964, 2733-2735

TOPIC TAGS: saturated vapor pressure, mercury telluride vapor, vapor pres-
sure temperature dependence 7

ABSTRACT: The pressure of saturated mercury telluride vapors as a function of
temperature has been measured by the Knudsen method in the range from 215 to
309 C and by the flux method from 292 to 388 C. The results are described by
the equation

$$\log P = -(5640/T) + 9.13 \text{ (mm Hg)}$$

It is deduced from this equation that $\Delta H_{\text{subl}} = 25.6 \text{ kcal/mole}$. Orig. art. has:
2 figures and 1 table

Cord 1/2

L 24786-65

ACCESSION NR: AP4049619

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskoy institut im.
D. I. Mendeleeva (Moscow Institute of Chemical Technology)

SUBMITTED: 24Dec63

ENCL: 00

SUB CODE: GC, ME

NO REF SOV: 009

OTHER: 003

Cord 2/2

SILINA, E.Yu.; KARAPET'YANTS, M.Kh. (Moscow)

Determination of saturated vapor pressure by the flow method under conditions of significant thermodiffusion effects. Zhur. fiz. khim. 38 no.12:2907-2912 D '64.

(MIRA 18:2)

1. Moskovskiy khimiko-tekhnologicheskii institut imeni D.I. Mendeleeva.

KARAPET'YANTS, M.Kh.; KHOZHAINOV, Yu.M.

Application of the methods of comparative evaluation for determining the properties of substances occurring in corresponding states. Temperature dependence of saturated vapor pressure. Trudy MKHTI no.44:10-12 '64. (MIRA 18:1)

KARAPET'YANTS, Mikhail Khristoforovich; GERASIMOV, Ya.I., otv.
red.; MEDVEDEV, V.A., red.

[Methods for the comparative calculation of physicochemical
properties] Metody sravnitel'nogo rascheta fiziko-
khimicheskikh svoistv. Moskva, Nauka, 1965. 401 p.
(MIRA 18:4)

1. Chlen-korrespondent AN SSSR (for Gerasimov).

KARAPET'YANTS, M.Kh.; FINYAKINA, V.N.

Relation between heat and temperature of reaction in the series of similar compounds. Dissociation of carbonates. Izv.vys.ucheb. zav.; khim.i khim.tekh. 8 no.4:539-542 '65.

(MIRA 18:11)

1. Moskovskiy khimiko-tehnologicheskoy institut imeni Mendeleyeva, kafedra obshchey i neorganicheskoy khimii i kafedra tekhnologii elektrovakuumnykh proizvodstv.

L 62590-65 EPF(c)/EWG(j)/EWT(m)/ENP(b)/ENP(t) Pr-4/Ps-4 IJP(c) JW/

ACCESSION NR: AP5018244

JD/JG

UR/0078/65/010/007/1534/1540
541.44

39
B

AUTHOR: Karapet'yants, M. Kh.

TITLE: Comparative calculation of certain properties of hydrides

27

SOURCE: Zhurnal neorganicheskoy khimii, v. 10, no. 7, 1965, 1534-1540

TOPIC TAGS: thermodynamic property, physicochemical property, hydride, rare earth

ABSTRACT: The article shows the wide applicability of methods of comparative calculation to various macro- and microproperties of hydrides. The treatment is confined to solid and chiefly saltlike hydrides, for which experimental data are scarce. Of the six existing methods, three are illustrated. Approximate values were found for the following physical properties: density of beryllium and magnesium hydride, standard entropy of cesium hydride and borohydride, lattice constants of neodymium, praseodymium, cerium, and lanthanum hydride, lattice energy of rubidium and cesium deuteride, heat capacity of silver hydrofluoride, standard heat of formation of ammonium and sodium hydrofluoride, and standard

Card 1/2

L 62590-65

ACCESSION NR: AP5018244

free energy of formation of lanthanum, thulium, neodymium and yttrium hydride.
Orig. art. has: 11 figures and 13 tables.

ASSOCIATION: None

SUBMITTED: 01Feb64

ENCL: 00

SUB CODE: IC

NO REF SOV: 009

OTHER: 023

Card

lpp
2/2

MEDVEDEV, V.A.; YUNGMAN, V.S.; VOROB'YEV, A.F.; GURVICH, L.V.;
BERGMAN, G.A.; REZNITSKIY, L.A.; KOLESOV, V.P.;
GAL'CHENKO, G.L.; KHODEYEV, Yu.S.; KHACHKURUZOV, G.A.;
SOKOLOV, V.B.; GOROKHOV, L.N.; MONAYENKOVA, A.S.;
KOMAROVA, A.F.; VEYTS, I.V.; YURKOV, G.N.; MALENKOV, G.G.;
SMIRNOVA, N.L.; GLUSHKO, V.P., akademik, otv. red.;
MIKHAYLOV, V.V., red.; KARAPET'YANTS, M.Kh., red.

[Thermal constants of substances; reference book in ten
numbers] Termicheskie konstanty veshchestva; spravochnik
v desiati vypuskakh. Moskva, No.1. 1965. 144 p.
(MIRA 18:7)

1. Moscow. Vsesoyuznyy institut nauchnoy i tekhnicheskoy
informatsii.

KARAPET'YANTS, M.Kh.; SKLENSKAYA, E.V.

Methods of comparative evaluation for determining the properties
of complex compounds. Zhur. fiz. khim. 38 no.5:1312-1316 My '64.
(MIRA 18:12)

1. Khimiko-tehnologicheskiy institut imeni Mendeleeva.
Submitted June 18, 1963.

SILINA, E.Yu.; KARAPET'YANTS, M.Kh.

Temperature dependence of the saturated vapor pressure of
mercury telluride. Zhur.fiz.khim. 38 no.11:2733-2735 N '64.
(MIRA 18:2)

1. Moskovskiy khimiko-tekhnologicheskiy institut imeni
Mendeleeva.

BAZLOVA, I.V.; STAKHANOVA, M.S.; KARAFET'YANTS, M.Kh.; VLASENKO, K.K.

Heats of dissolution of sodium and potassium chloride mixtures
in aqueous solutions. Zhur. fiz. khim. 39 no.5:1245-1248 My '65.
(MIRA 18:8)

1. Moskovskiy ordena Lenina khimiko-tekhnicheskii institut
im. D.I. Mendeleyeva.

ANDRUSHEVA, I.L.; KARAPET'YANTS, M.Su.

Heat of formation of bismuth oxyselenite. Zhur.fiz.khim. 39
no.10:2410-2412 O '65. (MIRA 15:12)

1. Moskovskiy khimiko-tekhnologicheskiy institut imeni
Mendelayeva. Submitted June 16, 1964.

YERBANOV, L.N.; KARAPET'YANTS, M.Kh.; DRAKIN, S.I.

Comparative study of the heat of solvation of ions in alcohols.
Part 2. Zhur.fiz.khim. 39 no.11:2748-2752 N '65.

(MIRA 18:12)

1. Moskovskiy khimiko-tekhnologicheskii institut imeni D.I.
Mendeleeva.

ACC NR: AR6033763 SOURCE CODE: UR/0058/66/000/007/A012/A012

AUTHOR: Bazlova, I. V. ; Stakhanova, M. S. ; Gadzhiyev, S. N. ; Karapet'yants, M. Kh.

TITLE: Procedure of measuring small heat effects with the use of a thermistor

SOURCE: Ref. zh. Fizika, Abs. 7A112

REF SOURCE: Tr. Mosk. khim. -tekhnol. in-ta im. D. I. Mendeleyeva, vyp, 49, 1965, 32-34

TOPIC TAGS: heat effect, thermistor, measurement, aqueous solution, lithium chloride, sodium chloride/KMT-1 thermistor

ABSTRACT: A brief summary describing the experimental use of the KMT-1 type thermistor in calorimetry is given. The sensitivity of the circuit used by the authors amounted to 0.0003C. The heats of mixing have been measured for aqueous solutions of lithium and sodium chlorides. [Translation of abstract]

SUB CODE: 20/

Card 1/1

KARAPET'YANTS, M. L.

Poluboyarinov, D. N., Karapet'yants, M. L. and Fogel'zang, M. P. - "The investigation of semi-acid clays," Trudy Mosk. khim.-tekhnol. in-ta im. Mendeleeva, Issue 15, 1949, p. 106-25, - Bibliog: 6 items

SO: U-5240, 17, Dec. 53, (Letopis'Zhurnal 'nykh Statey, No. 25, 1949).

KARAPET'YANTS, M. L.

Poluboyarinov, D. N., Karapet'yants, M. L. and Fogel'zang, M. R. - "The manufacture of siphon wares from refractory semi-acid clays," Trudy Mosk. khim.-tekhnol. in-ta im. Mendeleeva, Issue 15, 1949, p. 126-36, - Bibliog: 9 items

SO: U-5240, 17, Dec. 53, (Istopis 'Zhurnal 'nykh Statey, No. 25, 1949).

L 03017-67 EWT(d) IJP(c)
ACC NR: AP6028217

SOURCE CODE: UR/0199/66/007/003/0531/0545

AUTHOR: Dybin, V. B.; Karapetyants, N. K.

ORG: none

TITLE: Convolution type integral equations in a class of generalized functions

SOURCE: Sibirskiy matematicheskiy zhurnal, v. 7, no. 3, 1966, 531-545

TOPIC TAGS: integral equation, boundary value problem, partial differential equation

ABSTRACT: A general method is proposed for the solution of the Wiener-Hopf equation
and its generalized equations

$$\lambda f(x) + \frac{1}{\sqrt{2\pi}} \int_0^{\infty} k(x-t)f(t)dt = g(x), \quad x > 0,$$

$$\lambda_1 f(x) + \frac{1}{\sqrt{2\pi}} \int_{-\infty}^{\infty} k_1(x-t)f(t)dt = g(x), \quad x > 0,$$

$$\lambda_2 f(x) + \frac{1}{\sqrt{2\pi}} \int_{-\infty}^{\infty} k_2(x-t)f(t)dt = g(x), \quad x < 0,$$

Card 1/2

UDC: 517.948.32/33

L 03017-67

ACC NR: AP6028217

in two classes of slowly increasing generalized functions of finite order. A special case of these classes is given by spaces of functions of form $(x + i)^k f(x)$, where k is a positive integer and $f(x)$ is either a bounded or a square-summable function. The method for Riemann's problem is used, in which the Fourier transformation figures. To illustrate the application of the method, two examples are presented of solutions of the Wiener-Hopf problem. Orig. art. has: 62 formulas.

SUB CODE: 12/

SUBM DATE: 17May65/

ORIG REF: 017/

OTH REF: 001

Card 2/2 *eqh*

DOBRYNIN, V.N.; GUREVICH, A.I.; KARAPETYSN, M.G.; KOLOSOV, M.N.; SHERYAKIN, M.M.

Absolute configuration of tetracycline antibiotics. Izv. AN SSSR. Otd.
khim. nauk no. 9:1697 S '62. (MIRA 15:10)

1. Institut khimii prirodnikh soyedineniy AN SSSR.
(Tetracycline) (Antibiotics)

KARAPINA, T.N.

Syphilitic psychoses as shown by data in psychiatric hospitals of the White Russian S.S.R. Zdrav. Belor. 5 no.9:58-59 S '59. (MIRA 12:12)

1. Iz psikiatricheskogo otdeleniya 2-y Minskoy klinicheskoy bol'nitsy (glavnyy vrach B.V. Drivotinov, nauchnyy rukovoditel' - zavednyushchiy kafedroy psikiatrii Minskogo meditsinskogo instituta prof. M.A. Chali-
sov).

(PSYCHOSES)

(SYPHILIS)

KARAFET'YANTS, Mikhail Khristoforovich; KARAPET'YANTS, Mariya Leonidovna

[Tables of some thermodynamic properties of various
substances] Tablitsy nekotorykh termodinamicheskikh
svoistv razlichnykh veshchestv. Moskva, 1961. 163 p.
(Moscow. Khimiko-tekhnologicheskii institut. Trudy,
no.34). (MIRA 15:11)
(Organic compounds--Thermal properties)

CHEPIK, P.D., dotsent; KARAPINA, T.N.

Disability evaluation in cases with late results of brain injury.
Zdrav.Belor. 5 no.1:50-51 Ja '60. (MIRA 13:5)

1. Po materialam psikhonervologicheskoy Vrachebno-trudovoy ekspertizy gor. Minska.
(DISABILITY EVALUATION) (BRAIN--WOUNDS AND INJURIES)

YELISEYEV, M.Ya., inzhener; YERESENKOV, N.I., kandidat tekhnicheskikh nauk;
IL'IN, V.G., dotsent; KARAPISHCHENKO, N.I., inzhener; OVODOV, V.S.,
professor, doktor tekhnicheskikh nauk; LASTYAPIN, M.T., inzhener;
RYABYSHEV, M.G., redaktor; PEVZNER, V.I., tekhnicheskii redaktor

[Water supply for livestock on ranges] Vodosnabzhenie otgonnogo
zhivotnovodstva. Pod red. V.S.Ovodova. Moskva, Gos. izd-vo
sel'khoz. lit-ry, 1957. 243 p. (MLRA 10:8)
(Stock and stockbreeding) (Water supply, Rural)

KARAPUKHIN, V.I., kand.med.nauk

Alloplasty of the diaphragm and a defect in the chest cavity.
Vest.khir. no.6:108-109 '61. (MIRA 15:1)

1. Iz 4-y kafedry khirurgii (zav. - prof. V.I. Kazanskiy) Tsentral'-
nogo instituta usovershenstvovaniya vrachey na baze Tsentral'noy
klinicheskoy bol'nitsy Ministerstva putey soobshcheniya (nach. -
V.N. Zakharchenko).
(LUNG—DISEASES) (DIAPHRAGM—SURGERY)

Karapysh, V.V.

USSR/Thermodynamics, Thermochemistry. Equilibria. Physico-Chemical B-8
Analysis. Phase Transitions

Abs Jour : Ref Zhur - Khimiya, No 8, 1957, 26161

Author : D.P. Semchenko., V.V. Karapysh
Inst : Novocherkassk Polytechnical Institute
Title : Solubility of Chlorine in Perchloric Acid

Orig Pub : Nauch. tr. Novocherkas. politekhn. in-ta, 1956, 34, (48).
19-23

Abstract : The solubility of chlorine (I) in aqueous solutions of HClO_4 (II) in the concentration range of II up to 50% by weight at 25° was studied in connection with the investigation of the anode oxidation of the dissolved chlorine. The solubility of I in 50% solution of II was measured in the range from 0 to 50° . The results of the study are shown graphically. It was found that the solubility of I drops sharply with the rise of the II content in the zone of low concentrations of the latter (up to 5% by weight); further drop

Card : 1/2

USSR/Thermodynamics, Thermochemistry. Equilibria. Physico-Chemical B-8
Analysis. Phase Transitions

Abs Jour : Ref Zhur - Khimiya, No 8, 1957, 26161

of I concentration with the rise of the II content proceeds more slowly following a linear law. Within the range of II concentrations from 5 to 50% by weight, the amount of dissolved I per 1,000 g of water containing in the acid remains practically without change and is equal to 0.065 mols in the average. The hydrolysis degrees of I were computed using the experimental data and taking into consideration the dissociation and activity grades of II.

Card : 2/2

KARAS, Andrzej; RUCIŃSKI, Wit

Surgical treatment of pulmonary tuberculosis in Poland in
1948-1963. Gruzlica 33 no.5:369-379 My '65.

1. Z Kliniki Chirurgii Klatki Piersiowej Studium Doskonalenia
Lekarzy w Zakopanem (Kierownik: prof. dr. W. Rzepecki).

KIRIN A. X.

NAPALKOV, A.V.; KARAS', A.Ya.

Eliminating conditioned pathological bonds in experimental
hypertensive conditions [with summary in English]. Zhur.vys.nerv.
deiat. 7 no.3:402-409 My-Je '57. (MIRA 10:10)

1. Kafedra fiziologii zhivotnykh Moskovskogo gosudarstvennogo
universiteta.

(HYPERTENSION, experimental,
elimination of conditioned pathol. bonds in dogs (Rus))
(REFLEX, CONDITIONED,
elimination of conditioned pathol. bonds in exper.
hypertension (Rus))

KARAS', A.Ya.

Some characteristics of motor conditioned food reflexes to a chain of stimuli in the green crab (*Carcinus maenas*). Nauch. dokl. vys. shkoly; nauki no.2:83-87 '62. (MIRA 15:5)

1. Rekomendovana kafedroy fiziologii vysshey nervnoy deyatel'nosti Moskovskogo gosudarstvennogo universiteta im. M.V.Lomonosova.
(CONDITIONED RESPONSE) (NERVOUS SYSTEM—CRUSTACEA)

KARAS', A.Ya.

New data on conditioned inhibition in the green crab *Carcinus*
maenas. Nauch.dokl.vys.shkoly; biol.nauki no.2:87-93 '63.
(MIRA 16:4)

1. Rekomendovana kafedroy fiziologii vysshey nervnoy deyatel'-
nosti Moskovskogo gosudarstvennogo universiteta im. M.V.
Lomonosova.

(CONDITIONED RESPONSE)

(CRABS)

KARAS', A.Ya.

Conditioned food reflexes from the visual, tactile and static
receptors of the Black Sea crab *Carcinus maenas*. Zhur. vys.
nerv. deiat. 12 no.4:748-756 J1-Ag '62.

(MIRA 17:11)

1. Chair of Physiology of Higher Nervous Activity, Lomonosov
University, Moscow.

KARAS, A.; Preisler, V.; Radl, Z.

"Improving the quality of Czechoslovak cap-type insulators."

ENERGETIKA, Praha, Czechoslovakia, Vol. 9, no. ^H~~8~~, March 1959

Monthly List of East European Accessions Index (EEAI), Library of Congress,
Vol. 8, no. 8, August 1959

Unclassified

KARAS, C.; STARKEL, L.

"Extent of Glaciation in central Poland in the southern part of the Silesian Upland."
p.263

PRZEGLAD GEOGRAFICZNY. POLISH GEOGRAPHICAL REVIEW. (Polska Akademia Nauk. Instytut
Geografii) Warszawa, Poland. Vol. 30, no. 2, 1958

Monthly List of East European Accessions (MEAI) LC, Vol. 8, No. 6, June 1959

Uncl.

| 1ST AND 2ND ORDERS | | | | | | | | | | 3RD AND 4TH ORDERS | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|--------------------|--|--|--|--|--|--|--|--|--|
| PROCESSES AND PROPERTIES INDEX | | | | | | | | | | | | | | | | | | | |
| <p>KARAS, F</p> <p>6501. HIGH PRESSURE STEAM AND SILICON DIOXIDE. Karas, F. (Chem. Abstr., 1948, vol. 23, 49-51; abstr. in Chem. Abstr., 20th June, 1948, vol. 42, 4294). The difficulties caused by SiO_2 in high-pressure steam turbines are discussed.</p> <p>C.A.</p> | | | | | | | | | | | | | | | | | | | |
| <p>ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION</p> | | | | | | | | | | | | | | | | | | | |

KARAS, F.

Preservation of mineral oils in industry in the USSR. p.313.
SVETSKA VEDA: CHEMIE, Prague, Vol. 4, no. 3, 1954.

SJ: Monthly List of East European Accessions. (EEAL. LC, Vol. 5, No. 6 June 1956, Uncl.

CZECHOSLOVAKIA / Chemical Technology. Chemical Products H
and Their Applications. Catalysts and Sorbents.

Abs Jour: Ref Zhur-Khimiya, 1959, No 4, 12413.

Author : Karas, Frantisek; Pelikan, Josef.

Inst : Not given.

Title : Obtaining High-Purity Silica Gel.

Orig Pub: Chem. prumysl, 1958, 8, No 2, 59-61.

Abstract: A technological scheme is developed for the production of silica sol from Czechoslovakian ionites. It is established that cationite of "FN" quality and anionite of "MFD" quality are completely suitable for the preparation of silicic acid sol from a diluted water glass, which contains less than 3% SiO_2 , with the use of cationite "FN" in H plus-form, and less than 5% with the use of the same

Card 1/2

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... GZECHOSLOVAKIA / Chemical Technology. Chemical Products H
and Their Applications. Catalysts and Sorbents.

Abs Jour: Ref Zhur-Khimiya, 1959, No 4, 12413.

Abstract: cationite in NH_4 plus-form. Silica gel prepared
from this sol will be used in chromatography. --
I. Yelinek.

Card 2/2

KARAS, F., inz.,dr.

Chemical cleaning of boilers. Energetika Cz 12 no.2:85-86 F '62.

1. Vysoka skola chemickotechnologicka, Praha.

STANEK, Miroslav, inz.; TEYSSLER, Jiri, inz., dr.; FISCHER, Jiri, inz.;
SPITALNIK, inz.; STEKL, inz.; NAVRATIL, Miroslav, inz., dr.;
IBLER, Jaroslav, inz., dr.; KARAS, Frantisek, prof., inz., dr., ScDr.;
CESKA, inz.; HOFFMANN, V., inz.; CHALUPSKY, Josef, inz.;
FAPSO, O., inz.; ROCEK, Jaroslav, inz., ScC.; SVEJDA, J., inz.;
LENCZ, Imrich, inz.; RAJDA, Frantisek; BALOS, Jaroslav, inz.;
MACHA, Jiri, inz.

Third National Conference on the Results of Research and
Development of Power Installations. Energetika Cz:Suppl.:
Energetika 13 no.6:1-~~2~~⁴ '63.

KARAS, F., prof. inz. DrSc.; ELIASEK, J., doc.inz.; DLUHOS, J., inz.

Volatile substances for alkalization of high-pressure steam
conduits in electric power plants. Energetika Cz 14 no.11:566-568
N '64.

1. Chair of Power Engineering of the Higher School of Chemical
Technology, Prague (for Karas and Eliasek). 2. Elektrarny OKR,
Ostrava (for Dluhos).

SEBESTYEN, Karoly, dr.; MORVAI, Laszlo; RARAS, Gyula; KARAS, Gyulane

Tests on the quantitative appraisal of water prospecting borings.
Geofiz kszl 13 no.1:123-134 '64.

1. Editorial Board Member, "Geofizikai Közlemenyek" (for
Sebastyen).

KONETSKIY, N.V.; KOVTUN, V.A.; KARAS', G.Ye.; BERNSHTEYN, P.B.

Hydraulic press equalizing 1500 tons. Ogneupory 26 no. 2:62-
69 '61. (MIRA 14:2)

1. Semilukskiy ogneupornyy zavod (for Konetskiy, Kovtun, Karas').
2. Vsesoyuznyy institut ogneuporov (for Bernshteyn).
(Hydraulic presses)

MIL'SHENKO, R.S.; KARAS', G.Ye.

Rapid complexometric method of separate determination of
 Fe_2O_3 and Al_2O_3 in refractory materials. Ogneupory 28 no.12:
570 '63. (MIRA 16:12)

1. Semilukskiy ogneupornyiy zavod.

MIL'SHENKO, R.S.; KARAS', G.Ye.

Work carried on by the Central Factory Laboratory. Ogneupory 29 no.2:
92-94 '64. (MIRA 17:1)

1. Semilukskiy ogneuporny zavod.

KARAS', G.Ye.

Field session of the Section of Refractory Materials. Ogneupory
26 no. 2:96-99 '61. (MIRA 14:2)

1. Semilukskiy ogneupornyy zavod.
(Refractories industry)

MAKOVKIN, A.V.; KARAS', G.Ye.

Work of the design bureau of the Semiluki Refractories Plant.
Ogneupory 26 no.10:470-472 '61. (MIRA 14:11)

1. Semilukskiy ogneupornyy zavod.
(Semiluki--Refractories industry)

MIL'SHENKO, R.S.; KARAS', G.Ye.

Modern methods of testing refractories and their quality control.
Ogneupory 27 no.2:94-95 '62. (MIRA 15:3)

1. Semilukskiy ogneuporny zavod.
(Refractory materials--Testing)
(Refractories industry--Quality control)

KAZAKEVICH, S.S.; KHOSID, G.M.; MIKHAYLOVA, L.I.; KONETSKIY, N.V.; MIL'SHENKO, R.S.
TIMOFEYEV, A.F.; KARAS', G.Yo.

Burned fireclay blocks for large capacity blast furnace stacks.
Trudy Inst. ognep. no.34:3-27 '63. (MIRA 17:10)

1. Vsesoyuznyy institut ogneporov (for Mikhaylova). 2. Semilukskiy
ognepornyy zavod (for Karas').

MIL'SHENKO, R.S.; KARAS', O.Ye.

Use of high-alumina and ordinary grog burned in rotary kilns.
Ogneupory 30 no.1:5-8 '65. (MIRA 18:3)

1. Semilukskiy ogneupornyiy zavod.

DOLEZALOVA, J.; KARAS, J.

Studies on physiological bases of surgical disease; preliminary communication. Acta. chir. orthop. traum. cech. 19 no.4-8:133-136 1952.
(CJML 23:2)

1. Of the Clinic of Orthopedics and Children's Surgery (Head--Prof. J. Zahradnicek, M.D.) of Charles University, Prague and of the Department of Orthopedics and Children's Surgery (Head--Vaclav Tosovsky, M.D.) of State Hospital in Prague II.

KARAS, D.

KARAS, D.

Kurystyna Lubianiecka; an obituary.

P. 3 (Gazeta Obserwatora) Vol. 10, No. 3, July 1957, Warszawa, Poland

SO: MONTHLY INDEX OF EAST EUROPEAN ACCESSIONS (EEAI) LC. VOL. 7, NO. 1, JAN. 1958

KARAS, J.

New trends in repairing. p. 510. STROJIRENICKA VYROBA. (Ministerstvo
strojirenstvi) Praha. Vol. 3, no. 12, Dec. 1955.

SOURCE: East European Accessions List, Vol. 5, no. 9, September 1955

KARAS, Jiri

Vehicle exchange method and calculation of the reserve of individual groups. Siln doprava 12 no. 8:4-5 Ag '64.

1. Development Center of the Automobile Repair Service.

KARAS, Jiri

Development of automobile repair services. Siln doprava
12 no.1:4-6 Ja '64.

1. Vyvojove stredisko automobiloveho opravarenstvi.

KARAS, Jiri

System of fixed prices in repair shops as a way of control.
Pod org 17 no. 12: 548-551 D '63.

1. Vytvořeno středisko automobilového opravárenství.

KARAS, Jiri

Three urgent problems of the automobile repair service. Siln
doprava 11 no.8:4-6 Ag '63.

1. Vyvojove stredisko automobiloveho opravarenstvi.

KAPAS, Jiri

Two ways for reducing the maintenance and repair costs.
Siln doprava 11 no. 12: 2-4 D '63.

1. Vyvojove stredisko automobiloveho opravarenstvi.

KARAS, .iri

Mechanization of the planning of spare parts in automobile
repair shops. Siln doprava 12 no.9:6-7 S '64.

KARAS, J.

"The Czech Maresev", P. 9, (TECHNICKÉ NOVINY, Vol. 2, No. 9, May 1954,
Praha, Czechoslovakia)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 3, No. 12,
Dec. 1954, Uncl.

KARAS, Jozef; MATYJASIK, Zygmunt

An attempt at determining the fertilizing value of the sewage sediments of the Ner River in the light of field experiments. Postepy nauk roln 7 no.6:39-49 N-D '60. (KEAI 10:6)

1. Katedra Torfoznawstwa Szkoły Glownej Gospodarstwa Wiejskiego, Warszawa.
(Poland--Sewage)

SZYFELBEJN, Edward; KARAS, Josef

The problem of litter shortage on Polish farms. Postepy nauk
roln 8 no.1:73-80 '61. (KEAI 10:8)

1. Katedra Zoohigieny Szkoły Głównej Gospodarstwa Wiejskiego,
Warszawa.
(Litter(Bedding))

KARDASH, G.I.

PHASE I BOOK EXPLOITATION

SOV/5452

Donskoy, Ya. Ye., G.I. Kardash, and I.P. Lyalyuk, eds.

Mekhanizatsiya i avtomatizatsiya; sbornik statey ob opyte vnedreniya mekhanizatsii i avtomatizatsii na khar'kovskikh mashinostroitel'nykh zavodakh (Mechanization and Automation; Collection of Articles on the Introduction of Mechanization and Automation in Khar'kov Machinery-Manufacturing Plants) [Khar'kov] Khar'kovskoye knizhnoye izd-vo, 1960. 373 p. 3,900 copies printed.

Editorial Board: S.A. Vorob'yev, Candidate of Technical Sciences; Chairman of the Editorial Board: P.I. Zmaga, Engineer; A.A. Kablov, Engineer, V.I. Kuzubov, Engineer, A. Ye. Leonov, Docent, A.I. Tupitsyn, Candidate of Technical Sciences, and S.M. Khmara, Candidate of Technical Sciences; Eds.: Ya. Ye. Donskoy, G.I. Kardash, and I.P. Lyalyuk; Tech. Ed.: M.I. Limanova.

PURPOSE: This collection of articles is intended for technical and scientific personnel, outstanding workers, and shock workers of communist labor.

COVERAGE: The multifaceted experience of Khar'kov enterprises in the mechanization, automation, and improvement of manufacturing processes is generalized.

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Mechanization and Automation (Cont.)

SOV/5452

The development of new machines, instruments, and production methods is considered and attention is given to newly established enterprises, and to the introduction of telemechanics in the Khar'kov gas-system management. By including concrete examples and facts, the authors of the various articles attempt to demonstrate the achievements of the Khar'kov industrial complex in fulfilling the resolutions of the June (1959) and July (1960) Plenums of the Central Committee of the Communist Party of the Soviet Union. No personalities are mentioned. There are no references.

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VK/wrc/mas
8-10-61

POTEYKO, A.D.; KARAS', L.M.; TIMCHUK, A.I.; EPSHTEYN, V.M.

Synthetic diamonds at the "Serp i Molot" Plant in Kharkov.
Mashinostroitel' no.10:37-39 O '64. (MIRA 17:11)

KARIM, I.P., 1980.

Use of synthetic diamonds in the Goryi Molot's Gani. Mashirov
Article no. 5016-20 107 100 (MIRA 1982)

KARAS', L.M.

Basis for increasing labor productivity. Inform.biul.VDNKH no.3:
6-11 Mr '64. (MIRA 17:3)

1. Glavnyy tekhnolog zavoda Khar'kovskogo motorostroitel'nogo
"Serp i molot".

KRIVOKOBYL'SKIY, V.F.; KARAS', L.M.

Mechanization and automation of the manufacture of electric
motors at the "Serp i Molot" plant. Trakt. i sel'khoz mash. 31
[i.e.32] no.11:38-41 N '62. (MIRA 15:12')

1. Zamestitel' glavnogo inzh. Khar'kovskogo motorostroitel'nogo
zavoda "Serp i molot" (for Krivokobyl'skiy). 2. Glavnyy tekhnolog
Kar'kovskogo motorostroitel'nogo zavoda "Serp i molot" (for Karas').
(Electric motors) (Electric equipment industry)

VAKHTEL', V.Yu.; Balyuk, B.K.; KARAS', L.M.; PETUSHKOV, G.Ye.;
OVCHARENKO, V.P.; GORELYY, A.V.

Hardening of crankshafts by the method of stamping. Trakt. i
sel'khoz mash. no. 11:7-8 N '65. (MIRA 18:12)

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11. 2210

S/190/61/003/004/002/014
B101/B207

AUTHORS: Spasskiy, S. S., Karas', L. Ya.

TITLE: Problem of a quantitative characteristic of the activity of unsaturated compounds in copolymerization reactions

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 3, no. 4, 1961, 505-514

TEXT: The authors proceed from the papers of T. Alfrey, C. Price (Ref. 1, see below) in which the copolymerization of unsaturated compounds was characterized by two constants, the activity factor Q and polarity factor e ; e denotes the electron density of the double bond. According to these researchers, the following equations hold for the copolymerization constants r_1, r_2 : $r_1 = (Q_1/Q_2) \exp[-e_1(e_1 - e_2)]$ (1) and $r_2 = (Q_2/Q_1) \exp[-e_2(e_2 - e_1)]$ (2). The correction made by L. Wall (Ref. 2, see below) is mentioned, by which the polarity factors e_1^* and e_2^* were added, thus considering charge of radicals with unpaired electrons. It was the aim of the present study to express the activity factors by a constant which may be determined independently of the equations (1) and (2). As such the π bond share of the

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molecular refraction was chosen, since reactivity increases with increasing polarizability of the π bonds. Q is replaced by the product $\alpha\beta$. α expresses the polarizability of the π bonds characterized by refraction, β , the effects of the monomer structure not considered by α . For the polar factor of the monomer Σ , is introduced, for that of the radical, the authors use Σ^* and write down the following equations:

$$r_1 = (\alpha_1\beta_1/\alpha_2\beta_2) \exp[-\Sigma_1^*(\Sigma_1 - \Sigma_2)] \quad (5) \text{ and}$$

$$r_2 = (\alpha_2\beta_2/\alpha_1\beta_1) \exp[-\Sigma_2^*(\Sigma_2 - \Sigma_1)] \quad (6).$$

In consideration of the factor $\Delta\Sigma^*$ of the excess radical charge due to the unpaired electron, and the number n_1 , and n_2 of the conjugate double bonds the following is obtained:

$$r_1 = (\alpha_1\beta_1/\alpha_2\beta_2) \exp[-(\Sigma_1 + \Delta\Sigma^*/n_1)(\Sigma_1 - \Sigma_2)] \quad (9) \text{ and}$$

$$r_2 = (\alpha_2\beta_2/\alpha_1\beta_1) \exp[-(\Sigma_2 + \Delta\Sigma^*/n_2)(\Sigma_2 - \Sigma_1)] \quad (10).$$

Table 2 lists the results of the calculation of these factors. It was possible to differentiate between three groups of monomers. 1) $\beta \sim 1$ holds for the monosubstituted ethylene derivatives the double bond of which is conjugated with aromatic or carbonyl bond; 2) $\beta > 1$ holds for monosubstituted ethylene derivatives the

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double bond of which is conjugated with ethylene double bond; 3) $\beta < 1$ holds for ethylene derivatives with non-conjugated double bond or for monomers with conjugated double bond, however, with two substituents at the double bond. The low β value is due to steric hindrance. Table 3 compares the product $\alpha\beta$ with the kinetic constant k_{ch} of the chain growth and its

activation energy E_{ch} :

A comparison of the difference between the polarity factor Σ of styrene derivatives and Σ styrene with the Hammett constant σ (σ being taken from the paper by C. Price, Ref. 17, see below) shows good agreement (Table 4). Among 100 systems calculated, in 85 the deviation was less than 10%, in 8 a deviation of 10-15% was

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| Monomer | $\alpha \cdot \beta$ | $(k_{ch})_{60}$ | E_{ch} , kcal/mole |
|---------------------|----------------------|-----------------|----------------------|
| vinyl acetate | 0.23 | 2040 | 4.20 |
| vinyl chloride | 0.21 | 12900 | 3.70 |
| methyl acrylate | 3.69 | 1260 | 4.70 |
| acrylonitrile | 4.25 | 425 | - |
| methyl methacrylate | 4.90 | 575 | 4.70 |
| methacrylonitrile | 8.04 | 190 | 6.00 |

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| | Monomer | $\alpha\beta$ | $(k_{ch})_{60}$ | E_{ch} , kcal/mole |
|--|-----------|---------------|-----------------|----------------------|
| observed, and, only in three cases is was >15%. Although the method suggested is only an approximation method, the results obtained are better than those of Alfrey and Price. There are 4 tables and 17 references: 9 Soviet-bloc and 8 non-Soviet-bloc. The 4 references to English-language publications read as follows: T. Alfrey, C. Price, J. Polymer Sci., <u>2</u> , 101, 1947; L. Wall, J. Polymer Sci., <u>2</u> , 548, 1947; 5) F. Mayo, F. Lewis, C. Walling, J. Amer. Chem. Soc., <u>70</u> , 1529, 1948, C. Price, J. Polymer Sci., <u>3</u> , 778, 1948. | styrene | 12.56 | 178 | 7.25 |
| | butadiene | 16.63 | 105 | 9.30 |
| | isoprene | 15.52 | 50 | 9.80 |

ASSOCIATION: Institut khimii Ural'skogo filiala AN SSSR (Institute of Chemistry of Ural Branch of AS USSR)

SUBMITTED: June 15, 1960

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Table 2. The activity factors α and β , and the polarity factor Σ of some monomers. Legend: A) System of monomers; B) product $\alpha \cdot \beta$ for M_1 ; C) Mean of $\alpha \cdot \beta$ for M_1 ; D) activity factors for M_1 ; E) polarity factor for M_1 ; F) mean value of Σ for M_1 ; G) references for the experimental data of copolymerization constants! Ref. 6: T. Alfrey, J. Borrer, G. Marc, Sopolimerizatsiya (Copolymerization), Izd. in. lit., 1953; Ref. 7: C. Price, J. Polymer Sci., 16, 577, 1955; Ref. 8: Z. Macháček, Chem. listy, 48, 477, 1954; Ref. 9: B. L. Funt, E. A. Ogrizlo, J. Polymer Sci., 25, 279, 1957; Ref. 11: C. Price, J. Polymer Sci., 11, 575, 1953; Ref. 12: Sudzuki Tateliti, J. Chem. Soc. Japan, Industr. Chem. Sec., 56, 870, 1955; Ref. 13: M. M. Koton, O. K. Surnina, Dokl. AN SSSR, 113, 1063, 1957; 1) acrylonitrile; 2) vinylidene chloride, 3) methyl methacrylate, 4) styrene, 5) p-chloro styrene, 6) m-chloro styrene, 7) p-bromo styrene, 8) m-bromo styrene, 9) p-iodo styrene, 10) α -methyl styrene, 11) p-methyl styrene, 12) p-methoxy styrene, 13) p-nitrostyrene, 14) p-cyanostyrene, 15) p-dimethyl aminostyrene, 16) 2,5-dichloro styrene, 17) 2-vinyl pyridine, 18) 2-vinyl naphthalene, 19) methyl-vinyl ketone, 20) methyl acrylate, 21) butyl acrylate, 22) methyl- α -chloro acrylate, 23) methyl acrylonitrile,

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B101/B207

24) butadiene, 25) isoprene, 26) chloroprene, 27) allyl acetate, 28) vinyl acetate, 29) allyl chloride, 30) vinyl chloride, 31) cis-dichloro ethylene, 32) trichloro ethylene, 33) maleic anhydride, 34) diethyl fumarate, 35) diethyl maleinate, 36) β -bromo vinyl-ethyl ether.

| (A) Системы мономеров, для которых определены значения β и Σ | | (B) Произведение факторов активности $\alpha \cdot \beta$ для M_1 | (C) Средние значения $\alpha \cdot \beta$ для M_1 | (D) Факторы активности для M_1 | | (E) Фактор полноты Σ для M_1 | (F) Среднее значение фактора полноты Σ для M_1 |
|--|-------------------|--|--|-------------------------------------|---------|--|--|
| M_1 | M_2 | | | α | β | | |
| ① Акрилонитрил | ② Метилметакрилат | 4,25 | 4,25 | 4,25 | 1,00 | +1,84 | +1,67 |
| | ③ Стирол | | | | | +1,50 | |
| | ④ Винилиденхлорид | | | | | +0,90 | |
| ⑤ Винилиденхлорид | ② Метилметакрилат | 2,87 | 2,87 | 2,87 | 1,00 | +1,80 | +1,52 |
| | ③ Акрилонитрил | | | | | +1,46 | |
| | ④ Стирол | | | | | +1,31 | |
| ⑥ Метилметакрилат | ⑤ Стирол | 4,90 | 4,90 | 4,90 | 1,00 | +0,73 | +0,58 |
| | ② Акрилонитрил | | | | | +0,52 | |
| | ④ Винилиденхлорид | | | | | +0,50 | |

Card 6/11

L 61726-65 EMT(m)/EPF(c)/EMP(j)/ENA(c)

Pc-4/Pr-4/Ps-4 RPL WW/RM

ACCESSION NR: AP5013062

UR/0190/65/007/005/0891/0897
678.01:53+678.664

AUTHORS: Karas', L. Ya.; Tager, A. A.

TITLE: The mechanical properties of three-dimensional polyurethanes prepared on the basis of polydiethylene-succinate, polydiethyleneadipate, and polydiethylene-sebacate. 1st communication in the series "Influence of the chemical nature of the chain and degree of cross-linkage on the properties of polyurethanes"

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 5, 1965, 891-897

TOPIC TAGS: polymer, resin, polyurethane plastic, tensile stress, tensile strength, polyethylene

ABSTRACT: Physical properties of polyurethanes were determined in order to clarify existing discrepancies in the literature regarding the effect of cross-linkage network density on the mechanical and other properties of three-dimensional polyurethanes of different chemical natures. The mechanical properties of polyurethanes prepared on the basis of polyethylene-succinate, polyethylene-adipate and polyethylene-sebacate in the presence of trimethylpropane were studied. The degree of cross-linkage was determined by adjusting the concentration of

Card 1/2

1 61726-65

ACCESSION NR: AP5013062

3

trimethylpropane. The reactions were carried out at 120C. It was found that the mechanical properties of the polyurethane depend on the chemical nature of the polyurethane and the degree of cross-linkage. Increase in the degree of cross-linkage causes a drastic decrease in the strength of the polymer but has little effect on the glass temperature. The tensile strength of polyurethanes when expressed on a function of the degree of cross-linkage has a maximum, the nature and magnitude of which is determined by the ease of crystallization of the polyurethane. Aging increases the tensile strength of polyethylene-sebacate. It is concluded that, since the curves of tensile strength versus degree of cross-linkage intersect for different polyurethanes, the mechanical properties of the latter must be investigated over wide regions of cross-linkage before their suitability for a particular industrial application can be assessed. Zh. D. Timoshenko and R. S. Shcheglova participated in the experimental part of the investigation.

Orig. art. has: 2 tables and 6 graphs.

ASSOCIATION: Ural'skiy gosudarstvennyy universitet im. Gor'kogo (Ural State University)

SUBMITTED: 21Jul64

ENCL: 00

SUB CODE: MT, CC

NO REF SOV: 003

OTHER: 009

Ann
Card 2/2

L 18572-66 EWT(m)/EWP(j)/T/ETC(m)-6 WH/JW/JWD/RM
 ACC NR: AP6002432 SOURCE CODE: UR/0020/65/165/005/1122/1125
 AUTHORS: Tager, A. A.; Karas', L. Ya. 67
 ORG: none 7.44.55
 TITLE: Thermodynamics of swelling of three-dimensional polyurethanes 11
 SOURCE: AN SSSR. Doklady, v. 165, no. 5, 1965, 1122-1125
 TOPIC TAGS: polymer, polyurethane, thermodynamic analysis, thermodynamic function, thermodynamic property
 ABSTRACT: The sorbtion isotherms for the sorbtion of dioxane on a number of polyurethanes and also the entropy and enthalpy of mixing polyurethanes in dioxane solutions were determined. The sorbtion experiments were carried out by the method of A. A. Tager and V. A. Kargin (Koll. zhurn., 10, 455, 1948) and the solution experiments by the method of A. A. Tager (Fiziko-khimiya polimerov, M., 1963. str. 380). The experimental results are presented in graphs and tables (see Fig. 1). It is concluded that the flexibility of the polyurethane chains increases with increase in the number of methyl groups between the complex ester linkages. This paper was presented by Academician V. A. Kargin on 15 May 1965.
 Card 1/2 UDC: 678.03:53+678.664

L 18572-66

ACC NR: AP6002432

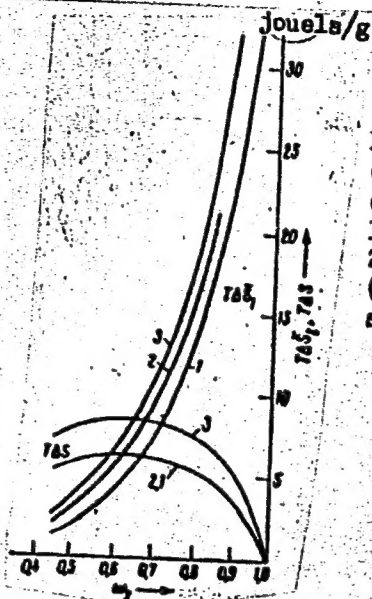


Fig. 1. Dependence of the entropy of mixing on the composition of the solution.
1 - polyurethane succinate,
2 - polyurethane adipate (B-1), 3 - polyurethane sebacinate.

Orig. art. has: 1 table and 3 graphs.

SUB CODE: 11, 07/SUBM DATE: 15 May 65/
Card 2/2 *SNV*

ORIG REF: 009/

OTH REF: 001

KARAS, Mieczyslaw

Witold Taszycki. Nauka polska 11 no.5:55-61 '63.

1. Uniwersytet Jagiellonski, Krakow.

KARAS, MIECZYSLAW.

KARAS, MIECZYSLAW. Nazwy miejscowe typu Podgora, Zalas w jezyku
polskim i w innych jezykach slowianskich. Wroclaw,
Zaklad im. Ossolinskih, 1955. 144 O. (polska
Akademia Nauk. Komitet Jezykoznawczy. Prace
onomastyczne, 1) (local names of the Podgora,
Zalas type in Polish and other Slavic Languages)
MIDW Not in DLC

GEOGRAPHY & GEOLOGY

Poland

So: East European Accessions, Vol. 5, May 1956